

What is claimed is:

1. A method for scheduling harvesting of information by a host computer from one or more information providers for one or more users, comprising the steps of:
 - (a) for a selected information provider, determining an update time for information stored by the selected information provider;
 - (b) for the selected information provider, determining a set of end users whose information could be modified by an update at the determined update time;
 - (c) generating a predicted login time for each end user in the determined set of end users;
 - (d) sorting the determined set of end users according to the predicted login time generated for each end user in the determined set; and
 - (e) assigning a harvesting time for each end user based on each end user's predicted login time.
2. The method of claim 1, wherein the step of determining a set of end users comprises:
 - (i) selecting end users configured to receive information from the selected information provider; and
 - (ii) eliminating end users not configured to receive information subject to update at the determined update time.

3. The method of claim 2, wherein the step of determining a set of end users further comprises eliminating end users not meeting a condition of the selected information provider for information update at the determined update time.
4. The method of claim 1, wherein the step of sorting the determined set of end users comprises sorting the determined set in ascending order of predicted login time.
5. The method of claim 1, wherein the step of generating a predicted login time for each end user in the determined set of end users comprises:
 - (i) for each end user, determining whether a login time profile associated with the end user meets a predetermined confidence threshold;
 - (ii) for each end user whose login time profile does not meet the predetermined confidence threshold, assigning a predicted login time corresponding to the present day and time; and
 - (iii) for each end user whose login time profile does meet the predetermined confidence threshold, assigning a predicted login time based on the end user's login time profile.
6. The method of claim 1, and further comprising the step of shifting each end user's predicted login time back a predetermined time interval.

7. The method of claim 6, wherein the step of assigning a harvest time comprises assigning a harvest time for each end user corresponding to his shifted login time.
8. The method of claim 1, wherein the step of assigning a harvest time comprises:
- (i) performing a distribution fit across time to generate a polynomial function that allows determination of the number of end users subject to harvesting over a specified time period;
 - (ii) determining a network activity curve of network activity associated with the host computer and the selected information provider;
 - (iii) generating an inverse of the determined network activity curve;
 - (iv) performing an integral matching algorithm utilizing the generated polynomial function and the generated inverse of the network activity curve; and
 - (v) assigning harvesting times for each end user to redistribute peak harvesting time towards time zero to flatten the distribution fit across time.
9. The method of claim 1, and further comprising the step of harvesting the information for each end user in the determined set of end user from the selected information provider at the harvesting time assigned to each end user.

10. A system for scheduling harvesting of information by a host computer from one or more information providers for one or more users, comprising:
- (a) a user store for storing data associated with end users;
 - (b) a provider store for storing data associated with information providers;
and
 - (c) a host computer in communication with the user store and the provider store, the host computer comprising a processor for performing the steps of:
 - (i) for a selected information provider, determining an update time for information stored by the selected information provider based on data associated with the selected information provider in the provider store;
 - (ii) for the selected information provider, determining a set of end users whose information could be modified by an update at the determined update time based on data associated with end users in the user store;
 - (iii) generating a predicted login time for each end user in the determined set of end users;
 - (iv) sorting the determined set of end users according to the predicted login time generated for each end user in the determined set; and
 - (v) assigning a harvesting time for each end user based on each end user's predicted login time.

sub-a8 11.

The system of claim 10, wherein the host computer processor performs the further step of harvesting the personal information for each end user in the determined set of end user from the selected information provider at the harvesting time assigned to each end user.

12. The system of claim 10, wherein the host computer processor performs the further step of shifting each end user's predicted login time back a predetermined time interval.

13. A computer-readable storage device storing instructions that upon execution cause a processor to schedule harvesting of information by a host computer from one or more information providers for one or more users by performing the steps of:

- (a) for a selected information provider, determining an update time for information stored by the selected information provider;
- (b) for the selected information provider, determining a set of end users whose information could be modified by an update at the determined update time;
- (c) generating a predicted login time for each end user in the determined set of end users;
- (d) sorting the determined set of end users according to the predicted login time generated for each end user in the determined set; and
- (e) assigning a harvesting time for each end user based on each end user's predicted login time.

sub-a)

14. The storage device of claim 13, and storing further instructions that upon execution cause the processor to perform the step of harvesting the personal information for each end user in the determined set of end user from the selected information provider at the harvesting time assigned to each end user.
15. The storage device of claim 13, and storing further instructions that upon execution cause the processor to perform the step of shifting each end user's predicted login time back a predetermined time interval.

09/20/2022